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ABSTRACT

This report describes a study undertaken by the Library Advisory Committee (LAC) to identify the crucial issues and trends affecting public academic libraries and to provide a set of recommendations to the State Board for Higher Education in these areas. The report focuses on the changing role and nature of academic libraries in Maryland as they move from traditional functions and services to those more dependent upon computer technology. The impact of automation on the individual academic library is analyzed in terms of collection development and management, services to users and internal operations, personnel, facilities, and costs and benefits, and it is recommended that a task force be created to study and propose actions on a number of crucial issues. Discussion of six recommendations made by the LAC identifies the issues to be addressed by the proposed task force, but leaves to the task force the formulation of plans and actions regarding these issues. For each recommendation a description of the intent of the LAC in making that recommendation is included, as well as some of the costs associated with the recommendation, and some of the benefits expected to be derived from its implementation. A 25-item glossary of acronyms is attached. (CGD)

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THE STATUS OF ACADEMIC LIBRARIES IN MARYLAND'S PUBLIC COLLEGES AND UNIVERSITIES

A Report of the
Library Advisory Committee
to the
State Board for Higher Education

State Board for Higher Education
16 Francis Street
Annapolis, Maryland

March 1985

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EXECUTIVE SUMMARY
of
THE STATUS OF ACADEMIC LIBRARIES IN MARYLAND'S
PUBLIC COLLEGES AND UNIVERSITIES

A report of the
LIBRARY ADVISORY COMMITTEE

The Library Advisory Committee undertook this study to identify the crucial issues affecting public academic libraries and to provide a set of recommendations to the State Board for Higher Education.

Maryland's investment in the academic libraries of its public colleges and universities is a large one. The last statewide data was collected for Fiscal Year 1982. In that year, the total funds expended for library operations by public 2-year and 4-year colleges and universities was $23.3 million. Of that sum, $13.9 million was for salaries and $6.6 million for acquisition of library materials. These 33 libraries had 819 employees, 303 professionals and 516 technical and clerical staff members.

I. Trends Affecting Academic Libraries: An Overview

Recently there have been significant changes in the role of the academic library. The key changes have been (1) a shift from a focus on the circulation of printed materials to the management of information services and (2) from manual operations to automated processes. As a result, the academic library should no longer be thought of as a free-standing, isolated repository of materials adequate to meet all the needs of the instructional and research programs of its parent campus, but, rather, the library has become the entry point for access to information locally, nationally, and worldwide.

The academic libraries in Maryland's public colleges and universities continue to operate in an environment where funding has been inadequate largely because the recent moderation of inflation has not extended to library materials. The failure of present funding mechanisms to reflect the unique role that academic libraries play within their parent institutions seriously affects the quality of higher education.

In light of the transformation of academic libraries as indicated in this report and the need for an appropriate state policy regarding academic libraries, the Library Advisory Committee recommends

RECOMMENDATION 1. THE STATE BOARD FOR HIGHER EDUCATION SHOULD APPOINT A TASK FORCE ON THE FUTURE OF ACADEMIC LIBRARIES. THE CHAIR OF THIS TASK FORCE SHOULD BE A MEMBER OF THE STATE BOARD FOR HIGHER EDUCATION. THE TASK FORCE SHOULD BE COMPOSED OF REPRESENTATIVES OF THE GOVERNOR'S OFFICE, THE GENERAL ASSEMBLY, THE DEPARTMENT OF BUDGET AND FISCAL PLANNING, THE SEGMENTAL BOARDS FOR PUBLIC HIGHER EDUCATION, AND ALSO SHOULD INCLUDE PROFESSIONAL LIBRARIANS AND SCHOLARS. THIS TASK FORCE SHOULD UNDERTAKE THE SEVERAL STUDIES CALLED FOR IN THIS REPORT AND PRESENT ITS FINDINGS WITH RECOMMENDATIONS TO THE STATE BOARD FOR HIGHER EDUCATION NO LATER THAN JUNE 30, 1986.

II. Collection Development and Management

Collection development must be shaped by the kind of academic institution being served. Therefore, beyond the fundamental core of knowledge common to all academic libraries, collections should reflect the mission and goals of the parent institution.

With academic libraries confronted by an explosion of information sources and technologies in a period of financial stringency, traditional approaches to collection development are not adequate. Now there must be a greater emphasis on institutional role and mission, increased resource sharing, utilization of automated research and management tools, and on the impact of technological advances on the cost of library materials and services.

RECOMMENDATION 2. THE TASK FORCE ON THE FUTURE OF ACADEMIC LIBRARIES SHOULD RECOMMEND TO THE STATE BOARD FOR HIGHER EDUCATION NEW LIBRARY COLLECTION STANDARDS FOR PUBLIC FOUR-YEAR COLLEGES AND UNIVERSITIES WHICH TAKE INTO ACCOUNT THE REQUIREMENTS OF A CORE COLLECTION PLUS THE ROLE AND MISSION OF EACH INSTITUTION AND THE IMPACT OF INTERLIBRARY LOAN NETWORKS.

III. Automation in the Academic Library

The extent of the use of automation in the libraries of Maryland's public colleges clearly ranges widely, from the projected comprehensive Geac system being installed throughout the University of Maryland to the absence of automation at certain small community colleges. Also, the various cataloging and circulation systems being used and planned are often incompatible from campus to campus and from segment to segment. If there is to be increased interlibrary cooperation in the future, planning should begin now on the methods to be used so as to permit the different automated systems to interface. Also, steps should be taken to provide for minimal automated services in the small, rural community colleges; so these colleges can take advantage of rapid resource sharing, the use of computerized data bases, and the benefits of automated technical services.

RECOMMENDATION 3. THE TASK FORCE ON THE FUTURE OF ACADEMIC LIBRARIES SHOULD STUDY THE PRESENT STATUS OF AUTOMATED LIBRARY PROCEDURES AND SERVICES WITHIN THE SEGMENTS OF PUBLIC HIGHER EDUCATION. THE TASK FORCE SHOULD ASCERTAIN THE STATE OF PLANNING FOR THE ENHANCEMENT OF LIBRARY AUTOMATION IN EACH SEGMENT, AND ASCERTAIN THE DIRECTION AND DEVELOPMENT OF AUTOMATION OVER THE NEXT TEN YEARS IN ORDER TO RECOMMEND A PLAN FOR LIBRARY AUTOMATION WITHIN THE PUBLIC ACADEMIC LIBRARIES TO THE SBHE AND THE SEGMENTAL EXECUTIVES.

Many technical problems will need to be addressed by the Task Force. Therefore, it should be supported by technical experts drawn from the segments as well as library directors and other administrators. The SBHE and the segments should make a committment to provide adequate funds to support the work of the Task Force, especially if technical studies need to be carried out.

Another obstacle to the full utilization of automated services and to the creation of an automated statewide resource sharing network is that most bibliographic records are not in machine-readable form. The conversion of existing printed card catalogs to on-line catalogs is a necessary first step in the development of a statewide comprehensive or union catalog. Such a union catalog would allow reduction in duplicate purchases of costly, little-used materials; make possible a comparative assessment of library collections; encourage the increased specialization of each college's collection; and expedite interlibrary loan operations.

RECOMMENDATION 4. THE SBHE SHOULD REQUEST EACH SEGMENT OF PUBLIC HIGHER EDUCATION TO SUBMIT BY JULY 1, 1985, AN ESTIMATED DOLLAR AMOUNT NEEDED (1) FOR THE RETROSPECTIVE CONVERSION OF THE EXISTING CATALOG RECORDS OF THE ACADEMIC LIBRARIES IN THAT SEGMENT TO A FULL LIBRARY OF CONGRESS MACHINE-READABLE CATALOGING (MARC) FORMAT OR A MARC-COMPATIBLE FORMAT; AND/OR (2) THE RECLASSIFICATION OF BIBLIOGRAPHIC RECORDS TO THE LIBRARY OF CONGRESS CATALOGING SYSTEM. THE SBHE SHOULD REFER THIS COST DATA TO THE TASK FORCE ON THE FUTURE OF ACADEMIC LIBRARIES.

IV. Personnel

The impact of automating the library has been to require a staff with greater technical skill and flexibility than before. It has also meant that staff members have acquired skills that make them more in demand outside libraries and has thus increased hiring and retention problems. Also, the great widening of employment possibilities for women has compounded these problems. Salary scales have not yet taken account of the changed nature of the library profession. Finally, Maryland's proximity to the Federal government, with some of the highest salaries for librarians in the nation, adversely affects the ability of our public colleges to attract and retain qualified personnel.

RECOMMENDATION 5. THE TASK FORCE ON THE FUTURE OF ACADEMIC LIBRARIES SHOULD STUDY THE STATUS AND SALARIES OF LIBRARY PERSONNEL IN PEER COLLEGES AND UNIVERSITIES AND IN STATE SYSTEMS COMPARABLE TO MARYLAND'S PUBLIC COLLEGES AND UNIVERSITIES AND IN COMPETITIVE LIBRARIES IN THE BALTIMORE-WASHINGTON METROPOLITAN AREA TO DETERMINE THE SALARY LEVELS REQUIRED TO ATTRACT AND RETAIN QUALIFIED PROFESSIONAL, TECHNICAL, AND SUPPORT STAFF.

RECOMMENDATION 6. THE TASK FORCE SHOULD STUDY THE NEED FOR STAFF DEVELOPMENT AND RETRAINING TO ALLOW LIBRARY STAFF MEMBERS TO PERFORM EFFECTIVELY.

V. Facilities

Libraries must continue to house collections in hard copy to support the institution's academic programs but must also provide increased accessibility and space for users who wish to use new technologies in the libraries. Thus, the demand for modifications to existing facilities and the building of additional facilities can be expected to continue.

INTRODUCTION

This report is intended as a planning document, in that the Library Advisory Committee has attempted to define "where we are" and to establish an agenda of issues to be addressed. The report is being shared with the State Board for Higher Education and the public in order to establish a context for the activities and policy positions of the Board. In preparing the report, the Committee consulted with representatives of libraries from each of the segments of higher education and examined data available to it through the State Board for Higher Education. The recommendations are those of the Library Advisory Committee to the State Board for Higher Education.

This report has two important limitations. First, it omits considerations of libraries of independent colleges. Second, the illustrative data in the report is intended to provide examples of the problems and trends the report addresses. While the report reflects the opinions and thinking of many Maryland librarians, the Committee is solely responsible for its contents.

For the past several decades, librarians at academic libraries have faced a number of crucial issues related to the question of what must be done to maintain and develop the quality of library services available to students and faculty. The major challenges facing Maryland's academic libraries are the information explosion, rapid technological change, the requirements for increased library staffs, and escalating costs in a climate of economic stringency. Some of the issues have been considered in

a series of library studies carried out since 1967.* The dominant themes of the studies were: the need for Maryland's public academic libraries to attain 100% of the American Library Association's minimum standards for library collections and staffing; the importance of interlibrary cooperation and resource sharing; and the lack of statewide coordination. The focus of the present report is the impact of automation on the individual academic library in terms of collection development and management, services to users and internal operations, personnel, and facilities.

The primary authors of this report were members of the Library Advisory Committee. However, valuable contributions were made to the chapter on automated services by Ms. Leah Nekritz, Associate Dean of Learning Resources, Prince Georges Community College, and Ms. Paula Hayes, Head of Reference, McKeldin Library, University of Maryland College Park.

*Nelson Associates, Inc. Possibilities for Library Coordination for Maryland Institutions of Higher Education, Maryland Advisory Council for Higher Education, 1967. Paul Bixler, Proposed Library Standards and Growth Patterns for Maryland Public Higher Education Institutions, Maryland Council for Higher Education, 1970. John Zimmerman, Libraries in Maryland Post-Secondary Education Institutions, State Board for Higher Education, 1978. William D. Mathews, Bibliographic Network Services for Libraries in the State of Maryland, State Board for Higher Education, 1979.

I. TRENDS AFFECTING ACADEMIC LIBRARIES: AN OVERVIEW

The traditional functions of a college or university--research, teaching, and service--create diverse demands on academic libraries to provide extensive collections and a wide range of specialized services. An academic library looks to the role and mission of its parent college or university to determine the emphasis to give to each of these functions. Moreover, recently there have been significant changes in the role of the academic library itself. The key changes have been shifts from a focus on the circulation of printed materials to the management of information services and from manual operations to automated processes. When needed materials or information are not immediately accessible locally, the library has a role in providing alternative means of access. The academic library can no longer be thought of as a free-standing, isolated repository of materials adequate to meet all of the instructional and research programs of its parent campus; rather, the library has become the entry point for access to information locally, nationally, and worldwide.

In the midst of these changes, many academic libraries nationwide find themselves in a crisis generated by powerful economic and technological forces affecting their character and future performance, which are certain to be intensified during the coming years. The history of funding of higher education in the State of Maryland has made it increasingly difficult for public college and university libraries to adapt to the changing demands placed on them as they move from traditional modes of activity and services to those modes dependent upon computer technology. The libraries must adapt to new forms of collection content and means of access to information; different patterns for hiring, training, and utilizing

staff; use of advanced computer software and hardware; and, finally, funding mechanisms that facilitate change and permit libraries to serve adequately the needs of faculty, students, and external users.

The Impact of Inflation

The State's academic libraries continue to operate in an environment where funding has been inadequate for over a decade, and deficits have been particularly acute during recent years. This is largely because the recent moderation of inflation rates has not extended to library materials. The average price of hardcover books rose from $26.63 in 1981 to $30.59 in 1982--an increase of 14.9 percent. (See Table 1.) Prices of periodicals, serials, and microforms have also continued on an upward trend; for example, the average subscription price for a medical journal has more than quadrupled from $23.00 in 1970 to $112.72 in 1983. (See Table 2.) Moreover, average prices vary greatly by subject areas; so that certain libraries have been damaged even more by inflation. University and research libraries experience, for example, a a somewhat higher than average price increase--about 18 percent overall from 1981 to 1982 alone--because they purchase materials in support of both academic and research programs in more costly subject areas. (See Table 3.)

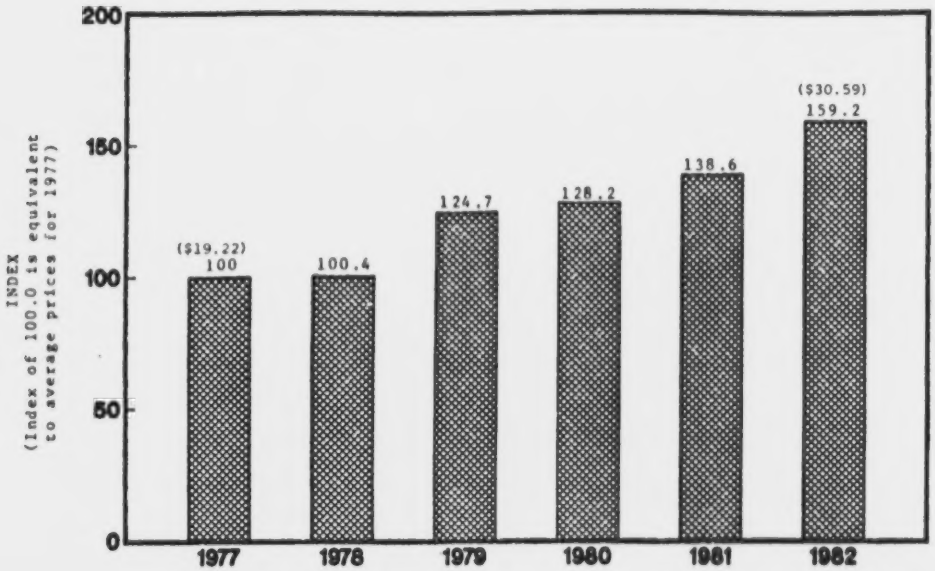
If the costs of library materials continue to increase and if the State's academic libraries suffer a continued decline in purchasing power, then it should surprise no one that our future library holdings will be determined more on the basis of cost than on the criteria of need and quality.

Collection Development and Resource Sharing

Academic libraries across the nation confront an explosion in the quantity of scholarly materials in all formats and the introduction of advanced technologies to library operations and services. Since

TABLE 1*

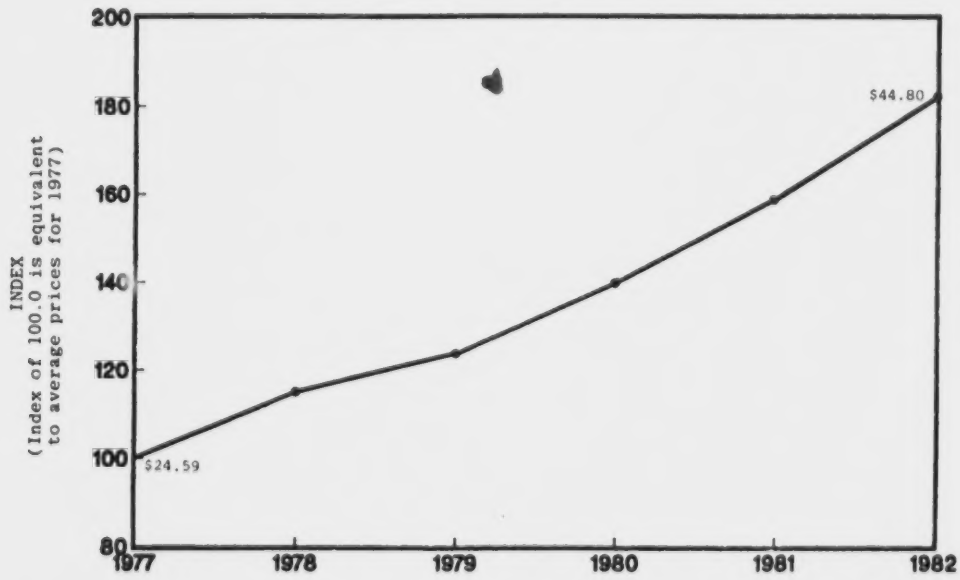
AVERAGE PRICE OF U.S. HARDCOVER BOOKS 1977-82



*Extracted from tables published in The Bowker Annual of Library and Book Trade Information, 28th ed., 1983.

TABLE 2*

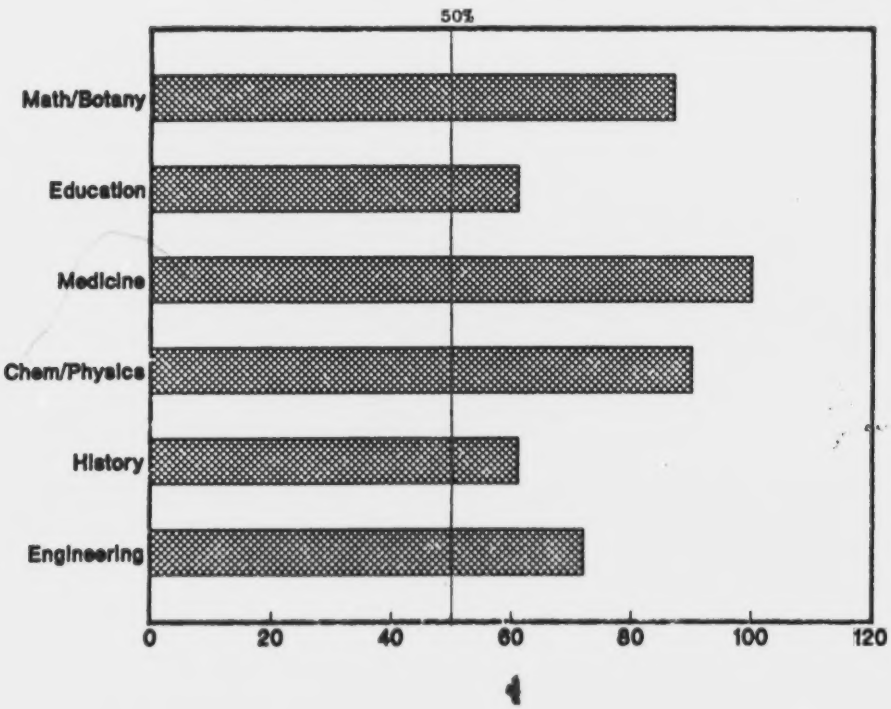
AVERAGE PRICE OF U.S. PERIODICALS 1977-82



*Extracted from tables published in The Bowker Annual of Library and Book Trade Information, 28th ed., 1983.

TABLE 3

% INCREASE IN AVERAGE PRICE BETWEEN 1977-82



no library can possibly be self-sufficient in terms of its holdings, resource sharing has become an important aspect of library service. The growth of national and regional bibliographic utilities such as the Online Computer Library Center, Inc. (OCLC), the Washington Library Network (WLN), and the Research Libraries Information Network (RLIN) not only create new options for provision of services but also carry new responsibilities for sharing library materials and expertise.

Whether sharing via computer data bases, interlibrary loan arrangements, or other mechanisms, new costs are incurred. Consequently, policy decisions must be made about institutional collection development. If the state's academic libraries specialize in certain collection areas, how would this specialization affect the campus of which the library is a part? Such problems must be viewed as institutional and statewide concerns rather than simply as library issues.

Benefits and Responsibilities of Modern Technologies

Perhaps the most profound changes in our academic libraries have come about from the introduction of new technologies into library services -- on-line catalogs, automated circulation systems, videodiscs, commercial data bases, regional and national library networks, cable television, and electronic publishing, to name a few. Today the modern academic library is not only the "heart of the institution," it is also the proving ground for a host of advanced technologies that will continue to revolutionize the production

of and dissemination of scholarly information. However, not yet resolved is the question of how these new technologies are to be merged with still needed traditional library services and of who will pay for them.

For example, computer-assisted searching of data bases for both bibliographic and non-bibliographic information has become a major, vital factor in library reference service. Vendors are adding new data bases at a rapid rate; just two vendors added 63 new data bases in 1983. Most libraries pay indirect costs (staff, communications lines, terminals, subscriptions to data bases, training, etc.), while direct costs (computer connect time, cost of print-outs) are paid by the library user. Even indirect costs are becoming prohibitive, however, as the number of data bases increases and the cost to subscribe to or to use them also increases.

Libraries across the country are adopting different solutions to this problem. Some subsidize all searches in full, either through new funds allocated expressly for that purpose or through the use of funds designated for library materials or operating costs. Some libraries subsidize searches in part and pass a portion of the costs on to users.

In addition, many materials published in traditional forms are becoming available for electronic access via commercial data bases. Other materials are now being created and distributed solely in electronic form, which means that they are accessible only with computer terminals via a data base vendor. Furthermore, the purchase of a book is a single cost that supports an academic program indefinitely; while electronic material has a cost that recurs with each use.

In the past, libraries have operated on the premise that services are

free, and materials are available to all students and faculty. The advent of electronic publishing, however, is forcing the state's colleges and universities to reevaluate traditional thinking. If a book or journal becomes available only as an electronic publication, is the library obligated to make the material available to any student or faculty member? If the user is asked to pay the considerable cost of accessing an item, then the libraries may deprive users of access to information that formerly had been free.

These are not issues that are in the future; rather, they are immediate concerns and demand immediate action on the part of all institutions. New and ever advancing technologies provide new solutions for many labor-intensive library processes, but also create the need for education of users, retraining and reorganization of staff, and additional resources, all amid substantial uncertainty about the long-range impacts of such innovations. There is more discussion of this in Section III of this report.

The Library Staff

High inflation and the introduction of new technologies combined with inadequate resources creates a situation which affects the ability of libraries to attract and retain competent, highly trained staff. Salaries of library employees in Maryland public academic libraries are low compared to salaries in the Baltimore/Washington metropolitan area. (See Section IV. Personnel for comparative figures). As a result, the rate of turnover of these employees is quite high, and associated costs for carefully training and supervising new staff are excessive. Finally, in spite of new services required of libraries, there has been no commensurate expansion of staff. Rather, most public four-year colleges and community colleges have had reductions in staff in the last five years.

The Funding of Academic Libraries

Being service oriented, academic libraries must respond to developments in curriculum and research to meet the needs of their constituents, and this may require, at times, large capital outlays and funding methods that are flexible and forward looking. As one expert has written,

> Library budgeting mechanisms rarely allow forward funding, permit massive equipment and system replacement, provide for amortization of long-range development efforts, or allow the establishment of "risk" capital or depreciation funds. Inevitably, long-range advance planning for continuous absorption of technological change is virtually nonexistent in libraries.[1]

Failure of funding mechanisms to reflect the unique role that academic libraries play within their parent institutions seriously affects the quality of higher education. Our academic libraries are now so underfunded that they are unable to support fully the initiatives required to meet the challenges before them.

In light of the transformation of academic libraries in the last two decades as indicated in this report and the need for an appropriate state policy regarding academic libraries, the Library Advisory Committee recommends

THE STATE BOARD FOR HIGHER EDUCATION SHOULD APPOINT A TASK FORCE ON THE FUTURE OF ACADEMIC LIBRARIES. THE CHAIR OF THIS TASK FORCE SHOULD BE A MEMBER OF THE STATE BOARD FOR HIGHER EDUCATION. THE TASK FORCE SHOULD BE COMPOSED OF REPRESENTATIVES OF THE GOVERNOR'S OFFICE, THE GENERAL ASSEMBLY, THE DEPARTMENT OF BUDGET AND FISCAL PLANNING, THE

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[1] Barbara Evans Markuson, "Cooperation and Library Network Development," College and Research Libraries, March 1979, p. 126.

SEGMENTAL BOARDS FOR PUBLIC HIGHER EDUCATION AND ALSO SHOULD INCLUDE PROFESSIONAL LIBRARIANS AND SCHOLARS. THE TASK FORCE SHOULD UNDERTAKE THE SEVERAL STUDIES CALLED FOR IN THIS REPORT. THE TASK FORCES SHOULD PRESENT ITS FINDINGS WITH RECOMMENDATIONS TO THE STATE BOARD FOR HIGHER EDUCATION NO LATER THAN JUNE 30, 1986.

II. COLLECTION DEVELOPMENT AND MANAGEMENT

Collection development in academic libraries has undergone a significant philosophical transition in recent decades. Traditionally, an academic library was viewed as an encyclopedic repository of knowledge; collections were built against the possibility that at some future time faculty might be attracted to use them and departments of instruction might be built around them. Highly specialized, often esoteric, collections were amassed because of the enrichment they offered and because of the prestige their possession brought to the parent institution. Extensive holdings procured for their own sake were often as important to a campus as the intellectual content they provided budding and practicing scholars.

The rising costs of space to house such collections, of staff to acquire and service them, of the materials themselves, have all necessitated a dramatic shift in approaches to building and maintaining collections. Libraries today must be more pragmatic; they first must support the current instructional and research functions of the institutions of which they are a part, and they may project their developmental efforts into the future only in terms of those projects and programs the fruition of which is reasonably assured.

Collection development, then, is shaped by the kind of academic institution being served and by the characteristics of that particular institution. Regardless of institutional kind and characteristics, however, all academic libraries share certain basic principles: they are responsible for supporting the instructional and research functions of the institutions of which they are a part; they should be able to provide minimal information on virtually any topic; and they should be able to provide access to further information or

to titles outside their collection scope, when called upon to do so. Most importantly, beyond the fundamental core of knowledge common to all academic libraries, collections should reflect the missions and goals of the institutions in which they are located.

Implications of Institutional Mission

The community college, for example, is primarily a teaching institution. Community college library collection development must place a high priority on support of this teaching function, on student research as a mode of learning, and on faculty research into ways of enhancing the learning process in various disiplines. Additionally, community college curricula, while centered on a liberal arts core, are more technically and vocationally oriented, providing short-term training and continuing education in a variety of career fields and attempting to be flexible and responsive to community need. Teaching methods for these programs often depend on the use of audiovisual materials as well as on expensive journals and reference services.

The four-year college curriculum responds to less rapidly changing demands and emphasizes a more traditional liberal arts curriculum -- albeit with increasing overtones of vocational content which may aid the baccalaureate recipient to secure employment without necessarily securing advanced training. With the emphasis upon instruction rather than research, the library collection will usually stress standard or seminal works which are apt to to be heavily used in addition to or in lieu of textbooks, rather than a wide range of different titles of primarily research interest.

The holdings tend to fluctuate rather less frequently and widely than do those of the community college.

It is assumed that certain arts and sciences programs will be offered by all public four-year colleges and universities; for that reason a significant duplication among campuses of essential works to support such programs is to be expected. This duplication cannot be eliminated through sharing of basic resources; since the titles heavily used on one campus to support these programs also will be heavily used on other campuses.

A university has a broad array of programs representing both pure and applied fields of knowledge, where doctoral and post-doctoral research is a major component of the environment. Research may take place in a number of settings, one of the most important of which is the library. Library resources in a university library, then, must necessarily be more extensive and possess greater collection depth than in those libraries supporting primarily undergraduate programs, where teaching receives more emphasis than research. A university library is developed with the intent of preserving its intellectual content for the ages, as well as serving the needs of current users.

In the community and four-year colleges selection is performed by both faculty and professional library staff with responsibility for varying degrees of coordination of this selection resting with the library staff. In larger institutions, where faculty involvement in collection building has diminished in recent years, most of the selection functions rest with the library staff, often subject bibliographers, who are assisted by preselection measures developed in the book trade, including approval plans and blanket order arrangements.

Collection Adequacy

The adequacy of library collections is, in the last analysis, a matter of subjective judgment. Rarely does any faculty believe the resources available to it are as rich or as broad as it would desire. Measures of adequacy are numerous; and, in Maryland, the American Library Association's standards for college libraries have been recognized by the State Board for Higher Education as the gauge by which library development will be judged.

The standards for four-year colleges, last revised in the early 1970's, have many limitations. Developed primarily for use in four-year colleges, their extension to universities, while possible, is based upon challengable assumptions. Moreover, they have not been changed or modified to reflect changes in collection development practices; and, while they may describe collections in multiple formats, they measure collection adequacy in print and microform formats only, omitting the non-print formats which are of growing importance, particularly in undergraduate colleges. That libraries must support audio and video collections, even collections of computer software, means whole new areas of cost. Finally, the provision of services goes unrecognized quantitatively in the ALA standards, thereby skewing any library's ability to meet the standard for collection adequacy.

The ALA two-year college standards, on the other hand, were written in 1979 with provision for regular review. They contain flexible standards to take into consideration formats other than print, recognize the service aspects of the program, and provide standards for both minimal and optimal levels.

The use of the four-year standard can work to an institution's detriment, however, unless it is recognized that the 100 percent level is a minimal rather than an optimal level and that collections must continually be augmented

to remain relevant to the curricula and the research projects they are designed to serve. After the ALA standard is reached, the ALA requires that new items equalling in number 5% of the existing collection should be added each year. This is rarely, if ever, achieved. Moreover, all too frequently when new programs are added, provisions for acquiring the new books, journals and other library resources that the programs require must be made at the expense of existing programs.

Finally, only by taking into account the actual buying power of library budgets in relation to a campus' needs and to the material available for purchase in the marketplace can an institution develop a realistic picture of how well or how poorly it is supporting its users' library collection requirements.

Sharing Resources: Costs and Benefits

Resource sharing is often seen as a possible panacea to the local shortage of sufficient holdings. It is argued in some quarters that if all academic libraries made their holdings known to one another and shared their materials via direct borrowing privileges or interlibrary loan (ILL), the needs of all libraries would be satisfied, or certainly to an appreciable extent. Resource sharing does, in fact, extend considerably the effective limits of any given collection and, by creating in patrons' minds the sense that virtually anything can be obtained upon reasonable notice, is therefore of considerable psychological value. Comparing ILL statistics with general circulation figures, however, should make it clear that even in a place where ILL numbers are relatively large, such as St. Mary's College of Maryland, the most important resource remains the local collection.

Such sharing has demonstrable value where very expensive little-used works are concerned. Its validity breaks down at the undergraduate level where the same titles, be they books or periodicals, are needed simultaneously on several campuses to support courses of similar content or purpose. Furthermore, resource sharing requires increased staffing to handle the related interlibrary loan activities. While increases in staff workload will occur in all participating libraries, those increases will be particularly heavy in the library or libraries doing the greatest amount of lending. Also, resource sharing results in added physical deterioration to the materials being shared, requiring earlier and more extensive treatment for preservation than would otherwise be necessary. On balance, then, resource sharing does not eliminate totally the costs of providing needed library materials, but rather translates these costs into new forms.

Resource sharing does allow a college to avoid building a collection to meet the needs of all potential users and allows collections to be focused on the requirements of the constituency each library serves. However, even in a sharing network of several libraries, it is highly likely that gaps will still exist and that what is available may not be useful in a shared mode.

Even so, because of the expansion of the information available through resource sharing and the potential for savings on acquisitions, the concept of sharing is worthy of pursuit. In addition to the automation requirements discussed in the next chapter, to enable such sharing to take place efficiently and effectively, the following will be required:

1. the development of a Maryland academic library delivery service to permit the timely transport of materials among libraries;

2. the undertaking statewide of a collection inventory to assess in-depth subject strength and hence major resource pools located at each library;
3. ultimately, the designation to the extent feasible of in-depth collecting responsibilities for highly specialized areas, building on strengths already available as identified in the collection inventory.

Collection Preservation

Collection development carries with it a collateral responsibility, only recently recognized to be of major magnitude: collection preservation. Heavy use of library materials results in the physical deterioration of the collection. Also, books published during the late nineteenth and early twentieth centuries were, as a rule, printed on high acid content paper which has shown with time to become brittle and eventually to disintegrate. Retention of the intellectual content of the collection through preservation measures applied to the physical components is an increasingly important and costly activity. The University of Maryland is involved in preliminary planning for a model preservation program, and University of of Baltimore has made preliminary plans for a conservation program. Means should be sought, however, to enable all academic libraries having unique or valuable holdings which must be maintained in perpetuity to treat such materials to assure their continued existence.

New Information Media: Who Will Pay?

While libraries confront the task of preserving what they have already acquired, they confront as well the reality of proliferating formats.

No longer are printed books and periodicals the sole carriers of information; microforms, sound recordings and cassettes, video tapes and discs, digital data, and other media have become increasingly important to academic library users. These differ from the print media in that they require the intervention of equipment - microform readers, tape players and the like - to enable users to retrieve their content, a factor which imposes additional costs on, and requires new staff skills within the library. Maintenance of equipment becomes as important as maintenance of materials; the ability to second-guess what will emerge as standard formats and retrieval devices is essential in order to avoid significant infusions of funds into fly-by-night formats and equipment which may prove short-lived. Ultramicrofiche and the seven-inch LP exemplify formats of short duration; now a major shift is foreseeable away from LP's to compact audio discs, from video tapes to video and optical digital discs.

The question of electronic publishing, bypassing print at the point of origin and initial dissemination, is a matter with which all academic libraries will have to grapple. At present, electronic publishing is exemplified primarily by the on-line indexing and abstracting services marketed by for-profit vendors. Information data bases, especially in business and the sciences, are proliferating. In 1983 alone, two major vendors added 63 new data bases. Periodicals, particularly in the biomedical fields, are being published electronically with print-out of specific articles available on demand. Such services may be accessed to meet the specific requirements of any given user, but at a substantial price.

These developments raise the issue of whether users hereafter must be denied access to information if they are unable to pay for it. As long as libraries are able to support the cost of holding the printed form of an indexing or abstracting service also available on-line, the user who chooses to perform a manual search will be adequately served. However, when the library is forced to give up the printed format, either for reasons of cost or because the publication will hereafter be available only electronically, the user who cannot afford to pay will be hampered significantly, perhaps irreparably. Institutions must decide whether to support electronic publishing as a new service requiring additional funds, or whether to divert funds from existing services, including traditional collection development. To do the latter would be to limit further the acquisition of those titles acquired to serve the needs of multiple users, the basis on which collections have traditionally been built.

It must be stressed that while the new technologies contain the potential for extending library resources in the state, these technologies are themselves costly; and in the case of resource identification and ultilization, they are only as effective as the scope and quality of the collections they describe make possible. The new technologies should be seen as enhancements or facilitators, not as substitutes for the careful amassing of collections in all relevant formats, particularly print, which assuredly will continue as a primary medium for the indefinite future. Where the new technologies are substantially augmenting information, as in the case of the computer, laser discs, etc., all involved with funding libraries must realize the need to provide adequate resources for these new developments in addition to the funds essential for on-going operation.

Summary and Recommendation

With academic libraries confronted by an explosion of information sources and technologies in a period of financial stringency, traditional approaches to collection development are not adequate. Now there must be a greater emphasis on institutional role and mission, increased resource sharing, utilization of automated research and management tools, and on the impact of technological advances on the cost of library materials and services.

In light of the above, the Library Advisory Committee recommends that THE TASK FORCE ON THE FUTURE OF ACADEMIC LIBRARIES SHOULD RECOMMEND TO THE STATE BOARD FOR HIGHER EDUCATION NEW LIBRARY COLLECTION STANDARDS FOR PUBLIC FOUR-YEAR COLLEGES AND UNIVERSITIES WHICH TAKE INTO ACCOUNT THE REQUIREMENTS OF A CORE COLLECTION PLUS THE ROLE AND MISSION OF EACH INSTITUTION AND THE IMPACT OF INTERLIBRARY LOAN NETWORKS.

III. AUTOMATION IN THE ACADEMIC LIBRARY

Librarians have long recognized the use of computer systems as not only sophisticated cataloging tools and devices for retrieving information in entirely new ways but also as management aids. The question is not whether to exploit the computer as a benefit for library users, but how this can best be done. This chapter reports on the present uses of automation in the public academic libraries in Maryland. Discussions of automation in each public segment are organized into the areas of technical services, readers services, and business operations. The information given indicates that our colleges and universities have made great strides in recent years but that the progress has been uneven. The high cost of automation has been an obstacle to improved services, especially at some of the smaller community colleges. The final section of this chapter will address several problems confronting academic libraries and propose how the State Board for Higher Education and the Library Advisory Committee should proceed.

A great variety of computer technology already exists in Maryland's public academic libraries. The most widespread applications are the use of OCLC for cataloging and interlibrary loan, automated circulation functions, and on-line database searching. The State's first integrated turn-key systems--the University of Maryland's Geac system and the UMAB Health Science Library's ILS system--are in the process of being implemented. Limited microcomputer applications have been attempted. One explanation for this paucity is the tight State regulations which are imposed on public four-year colleges concerning the purchasing of computer equipment. Another factor

is financial stringency.

The progress that has been achieved is not without pitfalls. The issue of compatibility is one of major importance to automated networking in the State; at this time, very little compatibility exists among the various systems being utilized in the State's libraries.

THE UNIVERSITY OF MARYLAND

At UMBC, UMCP, UMES and the UMAB Law Library a substantial part of the automation activity revolves around the Geac Library Information Management System (LIMS) which is now being implemented and which will result in a common bibliographic data base containing the holdings of the several libraries of the University of Maryland and the status of those holdings. In addition to an on-line catalog, the system includes the ability to handle both book and serial acquisitions and financial accounting, to maintain bibliographic records and their authority control, to transfer cataloging data derived from the OCLC bibliographic utility directly into the Geac computer, and to handle all circulation routines, including reserve books and materials booking. The system is being installed in parts, with subsystems being brought up on the several campuses at different times. It is anticipated that all campuses will bring up all modules by the end of FY86, the fourth year of the seven year contract.

The UMAB Health Sciences Library (HSL) implemented the Integrated Library System (ILS) in 1981. At present HSL is utilizing the circulation, cataloging, serials check-in, and on-line public catalog modules of the ILS. The word processing and electronic mail functions have been implemented on the same

minicomputer system. The ILS and the Geac LIMS system will be linked, making the automated systems capable of "talking" to each other. This will expand the information available to users on all UM campuses. In addition to these activities, automation in the libraries of the University extends into other areas as well, as will be evident from the following summary.

Technical Services

Cataloging and Database Management: All of the University of Maryland libraries are members of OCLC through the Pennsylvania Area Library Network (PALINET), a regional network based in Philadelphia. All contribute their current cataloging data to either the Geac or the ILS systems, and all have either undertaken retrospective conversion of their bibliographic records or will do so as funds become available. The Law Library is completely converted and has brought up the on-line catalog; UMBC has more than 80% of its monographic holdings represented in the on-line catalog; UMCP is actively involved in planning for the conversion of its extensive holdings into machine-readable format. The Health Sciences Library began a retrospective conversion project in the summer of 1981; 95% of the collection has been converted and included in the ILS database. Health Sciences has also submitted a grant to the National Library of Medicine for the creation of a union data base which would include the AV collections in the Schools of Nursing, Dentistry, Medicine, Social Work and Community Planning, and University Hospital as well as the collection of the Health Sciences Library. Another proposal involves the development of an end-user accessible Medical Literature Analysis and Retrieval System (MEDLARS) data base.

Table 4. Uses of Automation in the Libraries of Maryland's Public Colleges and Universities, Fall 1984

ACADEMIC LIBRARIES	BIBLIOGRAPHIC UTILITY		ON-LINE DATA BASE ACCESS							INTERNAL LIBRARY USES									BUSINESS OPERATIONS			
	OCLC	Other	DIALOG	BRS	LEXIS	WESTLAW	MEDLARS	New York Times	Other	Automated circulation	On-line catalog	Cataloging	Serials control	Acquisitions	Interlibrary loan	External access to data bases	Computer-assisted instruction	Personal computers for patron	Word processing	Budget/fund control	Inventory	Electronic mail
University of Maryland																						
UMCP	X		X	X	X	X				X	X	X	X	X	X	P		X	X	X	P		P
UMBC	X		X		X	X				X	X	X		X	P		X					
UMAB-Health Sciences	X		X	X	X	X	X		X	X	X	X	X	X	X	X		X	X			X
UMAB-Law	X		X		X	X				X	X	X			X		X					
UMES	X		X		X	X				X	X	X			X							
State Universities and Colleges																						
Bowie	X									X	P	X			X		X		X			
Coppin	X									X	P	X			X				X	X		
Frostburg	X		X								P	X			X							
Salisbury	X		X								P	X	X		X							
Towson	X		X							X	P	X			X							
Univ. of Baltimore-Law	X		X		X	X				X	P	X		X								
Univ. of Baltimore-Langsdale	X		X							X	P	X			X							
Morgan State University	X		X							X		X		P	X				P	P		
St. Mary's College of MD.	X		X									X		X	X							
Community Colleges																						
Allegany			X																			
Anne Arundel	X											X			X				X			
Catonsville	X		X									X	X		X				X			
Cecil										X			X						X			
Charles										X		X	X				X		X			
Chesapeake			X																X			
CCB										X									X			
Dundalk																						
Essex	X		X							X	P	X	X		X				X			
Frederick	X		X					X				X			X				X			
Garrett													P									
Hagerstown																						
Harford	X											X										X
Howard			X														X	X	X			
Montgomery	X								X	X	X	X							X			
Prince George's	X									X	X	X	X						X	X		
Wor-Wic Tech.																						

X - In operation
P - Planned or being implemented

The acquisitions subsystem of Geac is currently being brought up at UMCP and UMBC. UMCP currently produces a micro-fiche serials list utilizing the Administrative Computing Center's mainframe.

Readers Services

Circulation: This Geac subsystem is now in operation at UMCP, UMBC, UMES, and the UMAB Law Library. The Geac system attempts to insure privacy and security of user information by displaying such information only to the library on the campus where it is pertinent. By permitting the identification of those data elements in each functional module which have universal applicability and those which must be campus specific, the integrated system can make resource sharing possible while at the same time preserving the integrity of data which should not be shared. Health Sciences has been circulating its materials through the ILS circulation mode since 1981.

Data Base Searching: The campus libraries are also performing data base searches from commercially-available indexing and abstracting services such as DIALOG, LEXIS and WESTLAW. The Computer Assisted Research Service (CARS) at the University of Maryland College Park is expanding to include the Bibliographic Retrieval Service (BRS); UMBC wishes to augment the on-line services which they offer. In all cases the costs of these services necessitate that a portion of the charges be passed on to the user. For several years UMCP has conducted a pilot project involving on-line searching free of charge for quick reference questions which cannot be answered easily from print sources. In addition to providing access to data bases available through NTIS and BRS, the HSL has been experimenting with end-user training and is providing access to the Bibliographic Retrieval Service's BRS/After Dark, which allows end-users to perform their own on-line literature searches.

At UMCP and UMBC, OCLC terminals are located at the respective reference desks to verify bibliographic citations and assist users in determining which libraries own the materials they are seeking. UMCP also has access to RLIN for such purposes.

Interlibrary Loan: UMCP and the HSL utilize the OCLC Interlibrary Loan subsystem to enhance their interlibrary loan activities. UMBC is seeking funds to establish such a contract.

Instruction/User Computers: In some cases the libraries serve as adjuncts to campus computer centers. At UMCP 40 terminals located in the Engineering and Physical Sciences Library and 40 in the Hornbake Undergraduate Library are linked to the Computer Science Center, enabling students to do class work at remote sites. While these are by no means the only locations for Computer Center terminals outside the Center itself, terminal use statistics emanating from these two libraries are among the heaviest on campus.

At UMBC computer terminals are being installed in the library by the computer services staff. Computer-assisted instruction will soon be available using these terminals.

The Health Sciences Library plans to provide a consultation service to users who wish to explore the use of microcomputers in organizing personal and departmental information files. The Law Library also provides access to law-related computer-assisted instruction (CAI) programs through an IBM-PC.

Both the Geac and ILS systems will expand to allow access by users from remote locations such as campus offices and homes. HSL has received funding from the National Library of Medicine for a project entitled "Electronic Access to Reference Services (EARS)" which supports the development and evaluation of an electronic mail system. EARS allows off-site library users

to place requests electronically for bibliographic searches, interlibrary loan, photocopies, and reference information.

Business Operations

At UMCP the first terminals for what will ultimately be a full-fledged office automation system have been acquired. Another Geac product, the system is planned with 20 terminals dedicated to word processing, electronic mail, financial accounting and other executive functions which will be brought up over the five-year life of the system. If executive workstations are developed as the company anticipates, it should be possible, from a single terminal, to move back and forth between the integrated library system and the office automation system, thereby integrating bibliographic and management activities in ways never previously possible.

Electronic mail and word processing is also available to the staff at Health Sciences. UMBC reports insufficient funds for hardware to provide adequate office automation. It is anticipated that this capability will be included in a new campus plan for word processing development.

STATE UNIVERSITIES AND COLLEGES

The institutions discussed in this section include institutions governed by the Board of Trustees of State Universities and Colleges, as well as Morgan State University and St. Mary's College of Maryland. These colleges and universities coordinate their library policies through a council entitled the State College/University Library Directors of Maryland (SCOLD).

In 1983 SCOLD submitted to the Executive Director of the Board of Trustees of State Universities and Colleges (BTSUC) a proposal for the establishment of an on-line catalog and bibliographic system for the above institutions. Since then extensive discussions have been going on among the state colleges and universities, and the BTSUC office has designated technical staff to work with

the libraries on detailed plans. The proposal, recognizing the financial limitations faced and the group's interdependence, calls for "the development of a segment-wide, on-line bibliographic system which has flexible connections to other systems."

While the SCOLD libraries have been using the catalog facilities of OCLC and have utilized the circulation facilities of the CLSI system, a more comprehensive approach to the manipulation of bibliographic records and the program of services stemming from these records is needed. Further, it is also desirable to make accessible on external systems (institutional, commercial, etc.) the services now available to qualified internal users. Recognizing the activities that have already occurred, it will be necesary for any proposed system to incorporate the relevant aspects of existing systems.

Technical Services

Cataloging and Data Base Management: All of the state college and university libraries are making use of OCLC for cataloging purposes. What does differ, however, is the intermediary network used to access OCLC. While St. Mary's and Salisbury belong to PALINET, Towson, Morgan, Bowie, Coppin, and UB are members of CAPCON; and Frostburg belongs to PRLC, a Pittsburgh-based network.

St. Mary's has three micros, used for data-base search activities, instruction, and also for management tasks in the library. Salisbury State College has a list of periodicals holdings run on the college mainframe.

Morgan has completed the retrospective conversion of their book collection classified in the Library of Congress (LC) classification. This took three and one-half years and resulted in over 160,000 records currently being in machine-readable format. When the project was begun, only eight years worth of acquisitions (about 55,000 volumes) were in the LC collection and 100,000 were classified in the Dewey Decimal system. In order to have its entire book

collection recorded in machine-readable format and thereby have a complete on-line catalog, Morgan must still reclassify the Dewey collection to LC.

Readers Services

Circulation: Five of the eight libraries in the group--Towson, Morgan, Coppin, UB, and Bowie--have automated circulation systems. CLSI, based at Towson State University, is the system used.

Data Base Searching: Most of the libraries already perform on-line data base searches for their users. DIALOG is the most commonly used vendor. Salisbury also searches BRS, and St. Mary's initiated its services with BRS and later switched to DIALOG. The Law Library at the University of Baltimore searches on LEXIS and WESTLAW in addition to DIALOG. Fee structures vary widely. Salisbury offers a discount to its faculty and students, with the cost of searches averaging between five and twenty dollars. Bowie and Coppin do not offer searches at this time, referring their students to nearby colleges and universities. Bowie is investigating the possibilities of adding this service through the CAPCON network. Morgan has an OCLC terminal at the reference desk and uses it for verification and other purposes similar to those previously cited for UMCP and UMBC.

Interlibrary Loan: All of the libraries use OCLC for interlibrary loan. CLSI is also employed in this process in some cases.

Instruction/User Computers: The state college libraries do not engage extensively in computer-assisted instruction. In some instances, micro-computers have been set up in the library, as in the case of both St. Mary's and Bowie acquiring such labs in the fall of 1983. In neither case are these computers under library control.

Business Operations

Coppin uses an IBM-PC for control of internal files and planning purposes. Bowie has a word processor which it uses to manipulate statistics, compile reports and perform other office procedures. At Morgan plans exist for the acquisitions department to use an IBM-PC to maintain acquisitions data and vendor information. This is planned as an interim measure for Morgan until a fully automated acquisitions system is adopted. Word processing and record keeping are also planned.

COMMUNITY COLLEGES

The community colleges, as separately governed institutions of widely varying size and resources, present an extremely diverse picture of automation applications. They vary from Hagerstown, which has no library automation and has no plans in this direction, to Montgomery College, which is about to enter the second generation in its automated system. All of the automated systems are either based in the college mainframe computer or on microcomputers. All of the library systems, with the single exception of Montgomery College's new NOTIS, are in-house programs; there was no turn-key library system in operation in any of the community colleges until Montgomery's NOTIS became operational this past fall.

Technical Services and Data Base Management

Cataloging: Seven of the seventeen colleges (Anne Arundel, Essex, Frederick, Catonsville, Montgomery, Harford, and Prince George's) are connected to the OCLC data base and use it for current cataloging. The state of retrospective conversion varies. Catonsville has begun a retrospective conversion using OCLC and plans a complete MARC data base. Montgomery will be

converting its in-house data base to a MARC format compatible with the Northwestern On-Line Total Integrated System (NOTIS) using the college IBM mainframe. Prince George's has been converting its catalog by capturing data from Blackwell North America. The data base is approximately 80% complete. It is projected that in the next fiscal year it will be merged with OCLC data to create a complete Computer Output on Microfilm or COM catalog. Several of the colleges, including Essex, Charles and Harford, have in-house data bases. Essex plans an on-line catalog and will have COM in 1985. Allegany has begun keypunching its shelf-list with uncertain plans. Several of the colleges are developing AV cataloging systems. For example, Allegany is keypunching its AV catalog as well as its shelf-list. The Prince George's COM catalog will be complete including media, with the exception of music, which has a separate catalog. Prince George's also has a functioning, locally-developed microcomputer equipment reservation system on an IBM-PC.

Periodicals and serials control are also being undertaken by several of the colleges. Charles County produces its serials list on a word processor. Chesapeake is entering its periodicals into a central computer system to create a data base. Cecil has created a county union list of periodicals which it maintains in its central computer. Essex manages both continuations and periodicals via its college mainframe. Catonsville also has an in-house periodicals control system in the college computer. Garrett is planning periodicals control using an IBM-PC, which it is scheduled to acquire next year. Dundalk is considering periodicals control, but has no firm plans. Prince George's has the CLASS (Computerized Literature Access Search Service)

checkmate serials control system and is in the process of entering data into a TRS 80 Model 16 with hard disc. This system will be operational during 1984-1985.

Other applications include a full-text archives data base which Essex has established in the college computer. Bibliographies are being produced and maintained on word processing equipment at Chesapeake and Prince George's. Dundalk is also planning bibliographic applications.

Reader Services

Circulation: All of the community college circulation systems in operation at this time are locally-developed, in-house systems which operate on the college mainframe. Montgomery is in the process of purchasing the NOTIS software, and Cecil is interested in the purchase of the Highsmith turnkey microcomputer system. Allegany is creating a data base in hope of being able to automate circulation in the future. Charles County has an in-house circulation system which has been operational for several years, as does CCB, which is reevaluating its system at the present time. Essex has a circulation system which was also developed in-house using the college mainframe. Libraries such as Essex, Cecil and Prince George's, which are on-line to their college's central computer, have access to student data and use it for borrower status verification. Cecil uses its PC to record and analyze its statistical records.

Data base Searching: Several of the colleges are actively searching on-line data bases. DIALOG is the most commonly used data base; it is subscribed to by Allegany, Chesapeake, Essex, Frederick, Catonsville, and Howard. Frederick also searches the New York Times data base. Prince George's Community College continuously reviews its decision not to do data base searching because of its proximity to College Park. Montgomery College has recently subscribed to NOTIS.

Interlibrary Loan: While only Frederick and Catonsville reported use of the OCLC ILL system, others may use it also.

Instruction/User Computers: Several community colleges have instructional microcomputers, and Howard has two Texas Instruments 99 microcomputers for recreational use. At Charles County three Apples are being used for CAI nursing programs and a text readability analysis program. Howard has two Apples which are used for instruction. Harford plans to place microcomputers in its instructional lab.

Business Operations

Most of the colleges are using computers for business operations, either through mainframe terminals or microcomputers. Word processing is the most common application, and some colleges not actively engaged in it are planning for its implementation. However, community colleges have also explored other applications. Cecil uses a PC for budget control; Essex has an inventory control system in the college mainframe; Garrett intends to use its planned IBM-PC for housekeeping functions; Harford has an inventory system; and Prince George's uses its TRS 80 to produce labels and other processing products to maintain copying service records for billing and other record keeping functions.

SUMMARY

The extent of the use of computerized automation in the libraries of Maryland's public colleges clearly ranges widely from the projected comprehensive Geac system being installed throughout the University of Maryland to the absence of automation at certain small community colleges. Also, the various cataloging and circulation systems being used and planned are often incompatible from campus to campus and segment to segment. If

there is to be increased interlibrary cooperation in the future, planning should begin now on the methods to be used so as to permit the different automated systems to interface. Also, steps should be taken to provide for automated services in the small, rural community colleges; so these colleges can take advantage of rapid resource sharing, computerized data bases, and the benefits of automated technical services. Therefore, the Library Advisory Committee recommends:

> THE TASK FORCE ON THE FUTURE OF ACADEMIC LIBRARIES SHOULD STUDY THE PRESENT STATUS OF AUTOMATED LIBRARY PROCEDURES AND SERVICES WITHIN THE SEGMENTS OF PUBLIC HIGHER EDUCATION. THE TASK FORCE SHOULD ASCERTAIN THE STATE OF PLANNING FOR THE ENHANCEMENT OF LIBRARY AUTOMATION IN EACH SEGMENT, AND ASCERTAIN THE DIRECTION AND DEVELOPMENT OF AUTOMATION OVER THE NEXT TEN YEARS IN ORDER TO RECOMMEND A PLAN FOR LIBRARY AUTOMATION WITHIN THE PUBLIC ACADEMIC LIBRARIES TO THE SBHE AND THE SEGMENTAL EXECUTIVES.

Many technical problems will need to be addressed by this Task Force. Therefore, it should be supported by technical experts drawn from the segments as well as library directors and other administrators. The SBHE and the segments should make a committment to provide adequate funds to support the work of this task force, especially if technical studies need to be carried out.

Another obstacle to the full utilization of automated services and to the creation of an automated statewide resource sharing network is that most bibliographic records are not in machine-readable form. The conversion of existing printed card catalogs into on-line catalogs is a necessary first step in the development of a statewide comprehensive or union catalog. No significant advances can be made in these directions until the majority of

bibliographic records in the state have been converted to compatible machine-readable formats. A statewide union catalog would allow reduction in the purchase of costly, little-used materials, make possible a comparative assessment of library collections, encourage the increased specialization of each college's collection, and expedite interlibrary loan operations. Therefore, the Library Advisory Committee recommends:

THE SBHE SHOULD REQUEST EACH PUBLIC SEGMENT OF HIGHER EDUCATION TO SUBMIT BY JULY 1, 1985, AN ESTIMATED DOLLAR AMOUNT NEEDED

(1) FOR THE RETROSPECTIVE CONVERSION OF EXISTING CATALOG RECORDS OF THE ACADEMIC LIBRARIES IN THAT SEGMENT TO A FULL LIBRARY OF CONGRESS MACHINE-READABLE CATALOG (MARC) FORMAT OR A MARC-COMPATIBLE FORMAT; AND/OR

(2) THE RE-CLASSIFICATION OF BIBLIOGRAPHIC RECORDS TO THE LIBRARY OF CONGRESS CATALOGING SYSTEM.

THE SBHE SHOULD REFER THIS COST DATA TO THE TASK FORCE ON THE FUTURE OF THE ACADEMIC LIBRARY.

IV. PERSONNEL

Librarians have been typically seen as persons who only prepare incoming materials for the use of patrons or assist the latter in finding answers to queries in the reference and general collections. This perception of the library profession is no longer valid. It is based upon a traditional model of the academic library as a largely passive agent, waiting for the academic community it supports to come to it. Most staffing formulas, including the ALA formula used as a guideline for this state's publicly supported institutions, assume this traditional model.

In the past fifteen years, a number of changes have occurred within the library profession and in society at large which have affected library staffing. The major social change has been the great widening of employment possibilities open to women. The result is that libraries have had to compete more actively for the bright women who have historically staffed libraries. Salary scales must take account of this widening of possibilities.
A second complex of changes, again shared by librarianship with society generally, is that connected with computer technology, which has created a need for new skills not traditionally taught librarians. A third complex of changes, coming largely from within the library profession, has made it possible for librarians to participate much more actively and usefully in the teaching and research going on at their institutions, in recognition of which many institutions have awarded librarians faculty status. However, these new responsibilities are being carried out by library staffs that have either not increased in size or, more frequently, had staff reductions in the last decade.

In the following pages, the changes which have occurred in the various

areas of library operations and their impact upon library personnel are discussed.

Collection Development and Acquisitions

Academic libraries, even the largest ones, no longer aspire to collect everything on any conceivable subject. Price increases for materials, the proliferation of scholarly fields, and the rapid increase in scholarly publishing have made this always idealistic aim clearly impractical. The emphasis more recently has necessarily been on effectively meeting the immediate needs of the parent institution with the resources available.

Collection management, whether at the two-year college or the research university, has come to mean something more than merely acquiring books and periodicals. It implies a close analysis, more and more frequently assisted by computer, of the teaching and research needs of the institution, with a view of providing faculty and students with the information they require in whatever format and without the constraint of the information being located on the home campus. Although the goal is universal access to materials wherever they may be, this does not obviate having the necessary materials on campus to support the college's curriculum as an essential mission of the library.

The staff required for this analysis and management varies with the size and character of the institution. In most academic libraries, librarians are assuming a larger role in collection development than in previous times, when faculty members were primarily responsible for this function. Suffice it to say here that as patrons become more sophisticated in the use of bibliographic guides to sources, it becomes critically important to have librarians who are recognized for their professional skills in the complex academic setting.

There is a definite trend at all academic levels for librarians to take a lead role in collection development, principally because physical collections have become part of a larger network of information sources and keeping abreast of these developments is the full-time concern of the professional librarian, not of faculty members. Finally, the absolute decline in available monies has meant that the casual collection building that was common in the past is no longer acceptable.

Administratively, the acquisitions process--i.e., the ordering of books and paying for them--has benefited greatly from computerized fund accounting. In some systems, the basic bibliographic record needed for all subsequent functions is created at the time an order is placed, enabling the library to track an order through the processing procedure and greatly simplifying the task. Other systems facilitate the burdensome requirements of effectively managing large periodical collections, such as adding holding information to cards when new issues are in, creating notices for issues that have failed to arrive, issuing binding notices and labels when issues are complete, and much else of a routine housekeeping nature. In short, the principal benefit is to provide staff with the information needed to make intelligent decisions that go into developing a responsible and service-oriented library.

Technical Services

The most common application of automation has been in the cataloging function, with the cataloging information coming from a national data base. OCLC, the most widely used bibliographic utility, now contains over eleven million records. After appropriate manipulation of the record, a library

normally has catalog cards printed automatically, ready for filing. However, more importantly, this provides machine-readable records for input into on-line cataloging and circulation systems. On-line cataloging has released cataloging staff from the exacting drudgery of typing and alphabetizing cards. Automated methods, however, require substantial reorganization of technical operations and extensive retraining of support and professional staffs to their new responsibilities.

In staff terms, the automation of technical processes has reduced the requirement for professional librarians and allowed a shift of staff to public service functions. However the same automation has created a need for more highly trained support staff, especially data processing staff which are in great demand everywhere and which can command higher salaries than traditional clerical staff.

Public Services

While public services staff continue to spend much time in providing reference services and in handling related responsibilities, new activities have been added to their workload. The first of these is bibliographic instruction, which is formal instruction intended to provide inexperienced library users a working knowledge of the sources and techniques required to unlock information on a given subject. By presenting this information to entire classes or by means of computerized self-study programs, it is possible to present in greater depth better-prepared material to a larger body of users than would be practicable if students were instructed individually. In smaller colleges, the most effective presentation method has been to present the appropriate material within the confines of regularly scheduled courses. The student's use of the material in preparing a paper or other coursework assures that such

bibliographic instruction will have an impact on the student that presentations given outside regular classes fail to have. At all colleges, the goal is for students to have instruction proceeding from the basics in freshman courses to the increasingly sophisticated materials and approaches of upper-class courses. The graduating senior should possess a fairly complex set of research/information finding skills, which continue to have value in the student's career.

The second major new service is computer-assisted reference service. By searching computer-based indexes and abstracts and using sophisticated search techniques, current and specific bibliographies can be provided to order on almost any subject. Other data bases provide a wealth of specific factual information very quickly in answer to specific reader queries. Although readers themselves may become familiar enough with some data bases to use them unassisted, experience to date indicates that it is a full-time job to keep current on rapidly proliferating data bases and the techniques required to exploit them effectively. For librarians, it means learning new techniques and the frequent attendance at workshops and seminars to keep up to date.

The foregoing activities greatly enhance the usefulness of libraries to students and faculty and assist in both the teaching and research of their home institutions. Both, however, represent new labor intensive activities which have been added to, rather than being substituted for, a full round of on-going activities.

Support Staff

Academic libraries are open long hours and process immense quantities of paper--everything from fine notices and invoices to the books and journals on the shelves. While automation has reduced the amount of paper handled, it has not reduced workloads. It has made possible the shift of some duties from professionals to support staff. The cost, in staff terms, has been in increased training time; while the gain has been more interesting jobs. The impact on staff of computerization has been to require a support staff with greater technical skill, more education and flexibility than before. It has also meant that staff members have acquired skills that make them more in demand outside libraries and has thus increased hiring and retention problems. Increases in state classified pay scales since 1978 of only 18 percent combined with diminished pension and medical benefits, have particularly exacerbated these problems in the public colleges.

Management and Work Loads

The accelerated pace of change in a time of funding decreases has made library administration very challenging. The library director's problem becomes one of managing change in the face of severe outside constraints, both financial and legal. If there is a reward, it is the assurance that one is placing the library in a position to assume a larger role in institutional teaching and research activities than ever before.

But all this comes at a price. The result of automation has been to provide much higher levels of service rather than to allow reductions in staff. And as has already been pointed out, some of the new services are extremely labor-intensive. Some examples, taken from the experience of St.

St. Mary's College of Maryland, may serve to illustrate these generalizations. After development of the computerized interlibrary loan subsystem with OCLC, St. Mary's loan statistics doubled as shown in Table 5.

Table 5. Interlibrary Loans at St. Mary's College of Maryland

Fiscal Year	Requested by SMCM	Requests Filled	Requested of SMCM	Requests Filled
1979	988	744	1227	934
1980	1945	1550	1451	1156
1984	2061	1693	1762	1169

Borrowing increased so dramatically because automation eliminated delays caused by paperwork that previously had traveled slowly in the mails and also enlarged the range of easily locatable material. Such vastly increased resource sharing has generally facilitated scholarship, particularly in an era when book budgets lag behind inflation. Yet much of the process is still manual. Books have to be found on the shelves and placed in mailers. Bound periodical volumes must be located on the shelves, the requested article photocopied, and the item sent to the borrowing library. This all requires manual effort.

Similarly, automated circulation systems usually increase circulation by making it sufficiently easier to borrow, so that patrons take out more books. While librarians welcome and encourage this increased use of the collection, increases in circulation also result in a greater workload. For, while automation makes it much easier to ready books for their return to the shelves, the actual shelving must still be done by hand, one book at a time.

In the case of on-line data base searching, the statistics for St. Mary's are again revealing. As Table 6 shows, assuming that roughly an equal amount of

Table 6. Increase of Automated Data Base Searches at at St. Mary's College of Maryland

Fiscal Year	No. of Searches	No. of Files Searched	Hours on Line
1981	Zero		
1982	54	86	17.34
1983	152	289	38.83
1984	264	581	55.69

time is spent preparing for each search, in a public service unit with three professionals in 1981 and the same number in 1984, data base searching in 1984 took a large part of staff time that previously went to other activities.

The data in Table 7 below indicate the growth in another new service area at St. Mary's: bibliographic instruction. The library staff had to absorb this the increase in this activity at the same time that demands for data base searching were growing. There was no increase in staff. The decline in bibliographic instruction in FY 1984 was largely the result of the inability of the staff to accomodate growth in both areas.

Table 7. Increase of Bibliographic Instruction at St. Mary's College of Maryland

Fiscal Year	No. of Classes	No. of Students
1978	Less than 10 classes	
1981	36	627
1982	81	1483
1983	85	1286
1984	68	990

Staff Development/Retraining

A number of factors have caused an unprecedented need for library personnel to acquire techniques and competencies unheard of in libraries just a few years ago. These factors include increasing as well as more varied demands by library users, ever greater legal and fiscal responsibility, new technologies which have altered the means of performing routine functions, and new ways information is identified, acquired, and utilized.

Only recent graduates of library and information science programs have a formal theoretical (if not experiential) acquaintance with many of the areas new to academic librarianship. Those out of school more than five years are already in need of retraining unless their institutions have been able to support such training. Thus, an immediate and extensive concern is that of retraining and updating staff so that they can adjust to rapid technological change as their careers progress.

It becomes imperative, therefore, that libraries enable their staff members to acquire the necessary updating, be it through attendance at seminars, workshops, and short courses, or matriculation in advanced subject degree programs. It is important that libraries be able to encourage their personnel to take advantage of such opportunities through the provision of partial or total tuition/registration costs and through released time from work. To do so, however, necessitates increased staff development or travel funding and sufficient staff to permit adequate coverage of services in the absence of those away from the job for training.

Salary Levels

As librarianship requires ever more diverse kinds of skills and knowledge, colleges increasingly must compete with private industry and government for qualified personnel in fields--e.g., computer systems--in which

the compensation is far superior to traditional librarian pay scales. Librarianship has traditionally faired poorly among the professions in salary compensation, and within the field academic librarians are among the most poorly paid. Maryland's proximity to the federal government, with some of the highest salaries for librarians in the nation, coupled with the higher than average cost of living in many parts of the State, adversely affect the ability of the state's colleges and universities to attract and retain qualified personnel.

Salaries in Maryland's public academic libraries just are not competitive. The starting salary for a beginning librarian with a Masters of Library Science (MLS) degree in the Maryland State Universities and Colleges in 1983 was $13,643. Beginning salaries for 1983 MLS graduates for all types of libraries nationally was $16,875 and in the Northeast was $17,000.[1] Furthermore, starting salaries for professional librarians at our four-year colleges are even less competitive within the Baltimore-Washington area. For example, whereas the State Universities and Colleges in 1984 increased the starting salary for librarians to $14,462; one Baltimore County community college paid a beginning, but not inexperienced, professional $21,791; Baltimore County Public Library paid a new graduate $18,770; and even beleaguered Enoch Pratt Free Library paid a starting salary of $16,220.

Summary and Recommendations

The automation of the library has changed both the services librarians can offer the user and the way librarians do their work. Work-saving automation in the technical area has been balanced by an increased workload in the areas of public service--data base searching, interlibrary loans, bibliographic

1. National data from Carol L. Learmont and Stephen Van Houten, "Placements and Salaries 1983: Catching Up," Library Journal, October 1984, pp.1805-1811.

instruction being a few such areas. Automation has also required skills and technical knowledge not taught in library schools until recently. And constant technological advances require constant retraining to maintain effectiveness.

As librarians have become more adept in the use of automated systems, their skills have become more marketable. To combat the inefficiencies created by excessive staff turnover and low staff morale arising from salary inadequacy, it is imperative that salaries for academic librarians be raised to levels which are comparable with those in the institutions with which Maryland academic libraries must compete for personnel.

Therefore, the Library Advisory Committee recommends:

--THE TASK FORCE ON THE FUTURE OF ACADEMIC LIBRARIES SHOULD STUDY THE STATUS AND SALARIES OF LIBRARY PERSONNEL IN PEER COLLEGES AND UNIVERSITIES AND STATE SYSTEMS COMPARABLE TO MARYLAND'S PUBLIC COLLEGES AND UNIVERSITIES AND IN COMPETITIVE LIBRARIES IN THE BALTIMORE-WASHINGTON METROPOLITAN AREA TO DETERMINE THE SALARY LEVELS REQUIRED TO ATTRACT AND RETAIN QUALIFIED PROFESSIONAL, TECHNICAL, AND SUPPORT STAFF.

--THE TASK FORCE SHOULD STUDY THE NEED FOR STAFF DEVELOPMENT AND RETRAINING TO ALLOW LIBRARY STAFF MEMBERS TO PERFORM EFFECTIVELY.

V. FACILITIES

Library space needs are generally of five types, following the functions the library must perform. Library space can be classified as serving the following purposes: (1) administration; (2) public services; (3) technical services; (4) general collection storage; and (5) special collection storage. Public services include those activities which bring the library staff in contact with the library user, such as circulation, reference, interlibrary loan, and data base searches. Technical services include activities such as acquisitions and cataloging.

Although the automation of the library has not changed the overall classification of library space, it has dramatically changed the relationships among types of space usage. For example, Margaret Beckman has pointed out that

> "libraries planned for centralized card catalogs in close proximity to large technical service staffs may be difficult to adjust so that dispersed access via online terminals or COM catalogs can be provided throughout the library building. "1

Indeed, the card catalog-- that symbol of library facilities for so many--may not dominate the public services area much longer. At UMCP's McKeldin Library a committee was formed several years ago to consider the alternatives to the existing card catalog. The alternative chosen was to convert the entire catalog to machine-readable form and

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1. Margaret Beckman, "Library Buildings in the Network Environment, Journal of Academic Librarianship, vol.9, no.5, (1983), p.282.

to have the entire catalog on-line.

One of the major obstacles to the expanded use of automation, however, is that traditional library construction was not flexible enough to accomodate new technologies. Of the 33 major academic libraries and learning resource centers at Maryland's public two-year and four-year colleges, 11 were built or last renovated before 1970, another third between 1970 and 1975. Few of these buildings are flexible enough to accomodate the new technologies without some renovation or even expansion.

Advances in micrographics and in video/digital disc storage technology might suggest that much of a library's collection can be converted to miniaturized form, thereby gaining a great deal of space. The problem, however, is not that it cannot be done, but the cost of doing it. Original publication of materials in microform is still relatively rare. Microform reprinting is usually associated with periodicals which are sold to libraries first in printed form and then in microform so that the library may avoid binding and space-related costs. In a report issued by Howard Harris, a former SBHE staff member, as part of an analysis of plans of McKeldin Library (UMCP) for an addition and building alterations, Mr. Harris noted that of almost 11,000 currently received periodicals only some 2,300 could be acquired in microform. If those 2,300 were acquired in microform rather than printed copy, in 15 years 2,600 square feet of storage space - or about 1% of the library's total space - would be saved. The cost of converting existing printed material to microforms is so high as to be prohibitive. According to Mr. Harris, the per volume cost of microfilming would be higher than the cost of building and operating the space to store the original volume for 45 years.

Other factors in the microform versus printed copy argument include the need for additional microform readers and reader/printers, the space for such equipment as the microform collection grows, the resistance by students and faculty to using microforms, the need for better lighting and furniture suitable for studying from screened images, and, finally, the need for portable microform readers if any significant portion of the circulating collections is converted to microform. Therefore, while microform may, over time, account for a small but substantial reduction in costs and space requirements, it will be many years before any significant decrease in library space needs will be felt.

As discussed in earlier sections, library functions have changed quite substantially in recent years. Academic libraries now provide more services and more varied services than was the rule only a decade ago. The change in the nature of services has implications for facilities. Bibliographic instruction requires classroom space and provision for computer-based self-instruction. Data base searching requires room for terminals, printers, telecommunications equipment, patrons and librarian searchers. Audio-visual facilities must be provided for individuals, study groups and classes of various sizes. Room for staff and equipment to support the audio-visual activities must also be provided. Larger institutions need collection development staffs with appropriate skills because professional selection of materials is critical if the libraries are to effectively serve their constituencies.

The on-line catalog has been suggested as another area for potential space saving as mentioned above. It is suggested that elimination of all catalog cards and the cabinets which hold them will provide a windfall of useful space. However, the card catalog will need to be replaced by terminals which will take up a good portion of the vacated space. To use

McKeldin Library again as an example: the proposed renovation calls for a card catalog area of some 4,000 square feet to accomodate 123 card catalog cabinets and 48 users at consultation tables. The card catalog cabinets will take up about 1,200 square feet - not counting space in front of cabinets to access open drawers. The remainder of the space is designated for users of the catalog. When the catalog is converted to on-line, the user spaces will have to be provided with terminals. The exact number of terminals needed has not yet been determined, but, on the assumption that 48 terminals will be provided, at least 1,200 square feet will be required. The maximum savings, then, by eliminating the card catalog will be 2,800 square feet (4000 - 1200 = 2800). Furthermore, access terminals will also have to be located in additional space throughout the library to maximize use, further reducing the space saved. Therefore, there is a small saving, but not enough to suggest that space will no longer be a problem in libraries.

The need for space for terminals, for on-line catalogs, data base searching interlibrary loan searching, cooperative cataloging, circulation services, word processing, and other technical services will increase with increased automation. Additionally, microform readers and reader/printers as well as photocopiers will continue to be provided - perhaps in greater numbers than is now the case. Readers, too, must still be accomodated.

In fact, Margaret Beckman, in the article cited above suggests that the widespread use of automation will make presently accepted standards of square footage inadequate. When the typewriter is replaced by a microcomputer

or terminal with accompanying printer and modem, the present standards of square footage per support staff member will be obsolete. The space per reader can no longer be limited to a simple carrel or table and chair. A sophisticated reader station with a terminal and/or microform reader will require at least 30 square feet per reader rather than the present standard of 25.

Renovation

While the application of automation to libraries increases space requirements for staff and readers (the two elements which have traditionally been the largest occupants of space on a per unit basis), it also necessitates, in all but the newest structures, major alterations to library buildings. Humans are able to withstand wide changes in temperature and humidity; computers cannot. Therefore more sensitive and reliable heating, ventilating and air conditioning systems having limited downtime become mandatory if automated functions are to become the norm, or if audio-visual services are to be offered to any extent.

In addition, unless controlled lighting is employed, long time spans spent in front of computer terminals cause eye-strain, among other forms of physical fatigue. Blinds and drapes become necessities to overcome natural lighting problems; dimmer switches and task lighting must be introduced in order to improve artificial lighting in work environments.

Dial-up terminals require telephone lines; although multi-terminal systems linked to local computers may be more economically and effectively connected by local area cable networks than by telephone lines. Transmission of audio-

visual material from one physical site on campus to another must take place over a cable installation of some kind. Cables, more telephone lines, additional electrical wiring and outlets --- all require major renovations for most library buildings. If Maryland's academic libraries are to take advantage of the benefits of technology, they must first be physically prepared to do so, and that preparation may be at significant cost.

Security

The pressure for longer hours of operation during evenings and weekends create increased security problems. The traditional concern for collection preservation is now joined by concern for the protection of staff and readers from theft of their personal property and, more importantly, from assault. Security is a special problem, because library buildings are characterized by large stack spaces which cannot readily be controlled visually, unfrequented corners and cul-de-sacs, and areas of low intensity lighting.

Spacial improvements may alleviate the problems to some extent, but no solution is more effective than the presence of uniformed security officials who patrol buildings and stand guard at entrances or exits. Most libraries cannot afford the cost of guard service; yet their staffs are expected to maintain human safety and institutional property protection. Security measures are increasingly essential and should be viewed as an added cost for which the libraries should not be penalized by having to pay for them from existing resources. Indeed, security should be seen as a campus responsibility supported fully from non-library funds.

Deferred Maintenance

The life of any building is extended through on-going cleaning, painting, and repair. Cyclical scheduled maintenance and replacement of elements subject to deterioration over time have been demonstrated repeatedly to save money in the long run. Buildings which are kept clean and properly functioning tend to suffer less from vandalism by incumbents and visitors than those which are allowed to decline. The State policy of deferred maintenance poses a greater financial burden than one of preventative maintenance, and the State fiscal requirement of returning unused funds at year's end prevents accrual over time of monies which could be effectively used for keeping library buildings physically attractive and in good repair. As libraries become ever more expensive to construct and to operate, it is essential that these two policies be changed.

Summary

Libraries, then, must continue to house collections in hard copy to support their institution's academic programs and must simultaneously provide increased space for users who wish to use the new computer and disc storage technologies in the libraries. Thus, the demand for modifications to existing facilities and the building of additional facilities can be expected to continue.

VI. COSTS AND BENEFITS

Maryland's investment in the academic libraries of its public colleges and universities is a large one. The last statewide data on academic libraries was the collection of the Higher Education General Information Survey (HEGIS) in fall 1982 and was based on Fiscal Year 1982 data. While this data is not fully current, it does give an indication of comparative magnitude. Total funds expended for library operations by public two-year and four-year colleges in FY 1982 was $23.3 million. Of that sum, $13.9 million was for salaries and $6.6 for the acquisition of library materials. These libraries employed a total of 819 employees, of which 303 were professionals and 516 were clerical or technical staff. Public monies have constructed and maintain 33 academic library facilities. The State has an interest in seeing that this investment in library operations, employees, and facilities is managed in the most effective and efficient manner possible.

This report has focused on the changing role and nature of academic libraries as they move from traditional functions and services to those more dependent upon computer technology. The overarching recommendation to the State Board for Higher Education is the creation of a task force to study and propose actions on such crucial issues as the development of a statewide standard for library holdings and acquisitions, the direction of automated library services statewide, the progress in reclassification and retrospective conversion of Maryland academic library holdings, and the need for staff development and retraining as well as competitive salary levels.

This report includes numerous items which deserve consideration, but the the Library Advisory Committee is making only six recommendations to the State Board for Higher Education. The LAC has attempted to make recommendations

Table 8. Selected Data on Academic Libraries in Maryland's Public Colleges and Universities, Fall 1982

	Professional Employees	Technical and Clerical Staff	Total Staff	Salaries and Wages (excluding fringe benefits) (including students paid on an hourly basis)	Expenditures for materials (including books, periodicals, microforms, audiovisual and other materials)	Total library operating expenditures
ACADEMIC LIBRARIES						
University of Maryland						
UMCP	70.5	140	210.5	3,797,865	2,199,359	6,707,889
UMBC	13	33.5	46.5	690,171	538,087	1,372,356
UMAB-Health Sciences	20	30.5	50.5	751,073	406,096	1,328,534
UMAB-Law	6	8	14	291,345	355,901	715,106
UMES	8	9	17	244,560	140,200	433,568
UMUC	1	.5	1.5	30,955	6,494	44,564
Total University	118.5	221.5	340	5,805,969	3,646,137	10,602,017
State Universities and Colleges						
Bowie	19	27	46	415,891	110,524	621,124
Coppin	5	7	12	214,158	258,615	477,644
Frostburg	13	18.3	31.3	481,090	164,088	854,368
Salisbury	10	10	20	368,908	160,488	545,881
Towson	17	37	54	793,756	344,242	1,311,866
Univ. of Baltimore-Law	5	7	12	202,261	177,836	448,582
Univ. of Baltimore-Langsdale	11	14.2	25.2	406,449	96,704	559,666
Total BTSUC	80	120.5	200.5	2,882,513	1,312,497	4,839,131
Morgan State University	14	21	35	532,167	413,617	1,052,496
St. Mary's College of MD.	6	8	14	195,472	102,771	429,741
Total Four-Year Public	218.5	371	589.5	9,416,121	5,475,022	16,923,385
Community Colleges*						
Allegany	3	4	7	100,680	40,084	146,098
Anne Arundel	5.5	8	13.5	257,545	63,294	362,415
Catonsville	13	23.5	36.5	749,100	127,000	915,183
Cecil	1.5	1.5	3	43,762	51,512	111,626
Charles	7	9	16	215,471	41,252	300,589
Chesapeake	3	.6	3.6	57,900	50,206	137,600
CCB	10	8	18	378,200	83,500	508,500
Dundalk	2.75	3	5.7	116,233	52,286	198,264
Essex	4	13	17	305,404	37,582	392,534
Frederick	4.75	5.85	10.6	161,491	45,355	234,466
Garrett	0	4	4	58,790	28,646	94,710
Hagerstown	3	6	9	152,403	34,600	228,788
Harford	4	8.5	12.5	178,680	28,390	232,854
Howard	1.5	6	7.5	265,332	42,987	347,548
Montgomery	14	27.5	41.5	939,452	256,234	1,473,450
Prince George's	7.1	16.9	24	517,037	111,524	714,132
Wor-Wic Tech.	DOES NOT HAVE ITS OWN LIBRARY					
Total Community Colleges	84.1	145.4	229.5	4,497,480	1,094,452	6,398,757
Total public colleges and universities	302.6	516.4	819	13,913,601	6,569,474	23,322,142

Source: HEGIS Form 2300-5. "College and University Libraries - Fall 1982

*Audio-visual staff may be included in some community college data

which indicate the issues to be addressed by the proposed task force and to leave to the task force, which will have a broader representation of the public interest, the formulation of plans and actions to address these issues. A discussion of the intent of the LAC in making each recommendation and of some of the costs associated with the recommendations as well as some of the benefits to be derived from them is contained in the following pages.

RECOMMENDATION 1. THE STATE BOARD FOR HIGHER EDUCATION SHOULD APPOINT A TASK FORCE ON THE FUTURE OF ACADEMIC LIBRARIES. THE CHAIR OF THIS TASK FORCE SHOULD BE A MEMBER OF THE STATE BOARD FOR HIGHER EDUCATION. THE TASK FORCE SHOULD BE COMPOSED OF REPRESENTATIVES OF THE GOVERNOR'S OFFICE, THE GENERAL ASSEMBLY, THE DEPARTMENT OF BUDGET AND FISCAL PLANNING, THE SEGMENTAL BOARDS FOR PUBLIC HIGHER EDUCATION, AND ALSO SHOULD INCLUDE PROFESSIONAL LIBRARIANS AND SCHOLARS. THIS TASK FORCE SHOULD UNDERTAKE THE SEVERAL STUDIES CALLED FOR IN THIS REPORT AND PRESENT ITS FINDINGS WITH RECOMMENDATIONS TO THE STATE BOARD FOR HIGHER EDUCATION NO LATER THAN JUNE 30, 1986.

The Task Force should develop a plan which contains recommended actions to be taken by the State of Maryland to effect future cost savings and more efficient management and delivery of library services. A major charge to the Task Force is to analyze the changes taking place in academic libraries as discussed in this report and to identify the cost implications of those changes--implications which cannot be projected without considerably more data than is now available.

The Task Force can be expected to incur costs for consultants, data collection and analysis, travel, and other expenses of approximately $10,000.

RECOMMENDATION 2. THE TASK FORCE ON THE FUTURE OF ACADEMIC LIBRARIES SHOULD RECOMMEND TO THE STATE BOARD FOR HIGHER EDUCATION NEW LIBRARY COLLECTION STANDARDS FOR PUBLIC FOUR-YEAR COLLEGES AND UNIVERSITIES WHICH TAKE INTO ACCOUNT THE REQUIREMENTS OF A CORE COLLECTION PLUS THE ROLE AND MISSION OF EACH INSTITUTION AND THE IMPACT OF INTERLIBRARY LOAN NETWORKS.

As long as the rate of inflation for library materials continues to range far above the national inflation rate, libraries will continue to require substantial additional funds annually to maintain existing buying power, as well as to cope with the explosion in the amount of new scholarly information published each year. Because academic libraries no longer attempt to be fully self sufficient and increasingly share their resources, it may be possible to restrain acquisition costs. The American Library Association minimum standards do not recognize the way academic libraries are evolving. The promulgation of a new statewide standard for judging the adequacy of library holdings must recognize the principle of access for each library to the resources of all publicly supported academic libraries. Use of such a standard will not result in the reduction of present library materials budgets but should reduce instead the escalation of library materials expenditures.

> RECOMMENDATION 3. THE TASK FORCE ON THE FUTURE OF ACADEMIC LIBRARIES SHOULD STUDY THE PRESENT STATUS OF AUTOMATED LIBRARY PROCEDURES AND SERVICES WITHIN THE SEGMENTS OF PUBLIC HIGHER EDUCATION. THE TASK FORCE SHOULD ASCERTAIN THE STATE OF PLANNING FOR THE ENHANCEMENT OF LIBRARY AUTOMATION IN EACH SEGMENT, AND ASCERTAIN THE DIRECTION AND DEVELOPMENT OF AUTOMATION OVER THE NEXT TEN YEARS IN ORDER TO RECOMMEND A PLAN FOR LIBRARY AUTOMATION WITHIN THE PUBLIC ACADEMIC LIBRARIES TO THE SBHE AND THE SEGMENTAL EXECUTIVES.

Maryland's institutions of higher education cannot afford to fall behind in the introduction of advanced library technologies. Already the State has spent millions of dollars in the implementation of automated library functions and services, and its investment must be protected. Future cost savings through cooperative use of computer technology should be possible. Such cost savings may be prohibited by a proliferation of incompatible automated systems.

It is urgent that the State now give careful thought to the future direction of computer technology as it is and will be applied to academic library services.

RECOMMENDATION 4. THE SBHE SHOULD REQUEST EACH SEGMENT OF PUBLIC HIGHER EDUCATION TO SUBMIT BY JULY 1, 1985, AN ESTIMATED DOLLAR AMOUNT NEEDED FOR (1) THE RETROSPECTIVE CONVERSION OF THE EXISTING CATALOG RECORDS OF THE ACADEMIC LIBRARIES IN THAT SEGMENT TO A FULL LIBRARY OF CONGRESS MACHINE-READABLE CATALOG (MARC) FORMAT OR A MARC-COMPATIBLE FORMAT; AND/OR (2) THE RECLASSIFICATION OF BIBLIOGRAPHIC RECORDS TO THE LIBRARY OF CONGRESS CATALOGING SYSTEM. THE SBHE SHOULD REFER THIS COST DATA TO THE TASK FORCE ON THE FUTURE OF ACADEMIC LIBRARIES.

This is a necessary first step toward the creation of a comprehensive statewide automated interlibrary loan system. Furthermore, with the completion of conversion/reclassification of catalogs at all public four-year colleges and universities, a comparative analysis of the strengths and weaknesses of each collection would be possible and major resource pools could be identified. The groundwork for a coordinated collection development policy for the public colleges and universities would then exist.

The costs for conversion are high, and academic libraries cannot accomplish the task on existing budgets and with existing personnel. For example, the conversion of over 790,000 records at University of Maryland College Park alone will cost several million dollars. It is possible, however, to complete the conversion process for all academic libraries over a period of time. First, bibliographic records of the most used titles should be converted, with the records for less frequently used materials being entered into the on-line catalog at a later date. Costs might also be reduced through cooperative conversion projects which would reduce duplicative efforts.

RECOMMENDATION 5. THE TASK FORCE ON THE FUTURE OF ACADEMIC LIBRARIES SHOULD STUDY THE STATUS AND SALARIES OF LIBRARY PERSONNEL IN PEER COLLEGES AND UNIVERSITIES AND STATE SYSTEMS COMPARABLE TO MARYLAND'S PUBLIC COLLEGES AND UNIVERSITIES AND IN COMPETITIVE LIBRARIES IN THE

BALTIMORE-WASHINGTON METROPOLITAN AREA TO DETERMINE THE SALARY LEVELS REQUIRED TO ATTRACT AND RETAIN QUALIFIED PROFESSIONAL, TECHNICAL, AND SUPPORT STAFF.

RECOMMENDATION 6. THE TASK FORCE SHOULD STUDY THE NEED FOR STAFF DEVELOPMENT AND RETRAINING TO ALLOW LIBRARY STAFF MEMBERS TO PERFORM EFFECTIVELY.

The Library Advisory Committee believes that the State has yet to recognize the growing complexity and range of skills required of librarians to function effectively in a profession in rapid transition. Traditional salary structures are not adequate to retain highly trained information specialists. Conversely, if librarians are not provided staff development and retraining, then the library cannot benefit from automation. Clearly, the cost implications of this issue may be enormous; although the cost may be mitigated by concentrating initially on meeting the competition for staff in those areas of library services most vital to students and faculty.

GLOSSARY OF ACRONYMS

ALA--American Library Association

BRS--Bibliographic Retrieval Services

BTSUC--Board of Trustees of State Universities and Colleges

CAI--Computer-assisted instruction

CAPCON--Capitol Consortium Network

CLASS--Computerized Literature Access Search Service

CLSI--a turnkey automated circulation system

COM--Computer Output on Microfilm

IBM--International Business Machines Corporation

ILL--Interlibrary Loan

LIMS--Library Information Management System

MARC--Library of Congress Machine-Readable Cataloging

MEDLARS--Medical Literature Analysis and Retrieval System On-Line

MILO--Maryland Interlibrary Loan Organization

NLM--National Library of Medicine

NOTIS--Northwestern On-Line Total Integrated System

NTIS--National Technical Information Service

OCLC--Online Computer Library Center, Inc.

PALINET--Pennsylvania Area Library Network

PC--Personal Computer

PRLC--Pittsburgh Regional Library Center

RLIN--Research Libraries Information Network

SCOLD--State College/University Library Directors

SDC--System Development Corporation

WLN--Washington Library Network